



CITY OF ROCKVILLE

Solid Waste Collection System Evaluation

Results

September 13, 2004

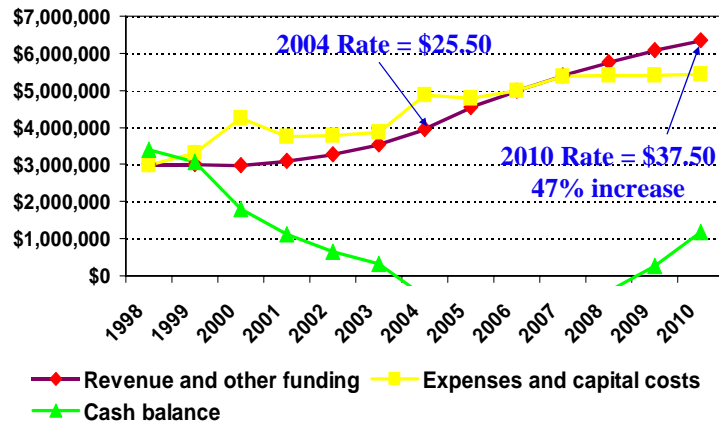


Project Purpose

- Assess operational efficiency of solid waste collection in Rockville
- Benchmark City against local and national collection systems
- Develop internal consensus for system changes
- Understand likely options for improving the system



Why Now?



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Project Summary

- Operational Observations
- Focus Groups with Equipment Operators
- Benchmarking Surveys
 - Local communities
 - National sampling
- Evaluate Alternative Collection Scenarios

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Refuse Collection Practices

- Curbside
- Backdoor
- Alley



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Refuse Findings

- Productivity falls within expected ranges
- Backdoor collection is problematic
 - *Either* eliminate service
 - *Or* implement tiered rate structure
- Focus Groups: Full support for eliminating backdoor service
- City could be served via greater automation

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Yard Waste Collection Practices

- Rearload—contained
- Chipper truck—brush
- Leaf vacuum—not shown



Yard Waste Findings

- Productivity is within expected ranges
- Duplicative routing with rearload and chipper truck
 - Disposal cost savings *does not* offset cost of chipper truck & crew
- Chipper truck route has been eliminated
 - Rearload provides all collection
 - \$92,000 annual savings





Benchmarking Overview

- Local benchmarking
 - Inform local officials of nearby program details
- National benchmarking
 - Identify industry trends
 - Identify “Best-in-class” providers



Benchmarking Summary

Local Benchmarking

College Park, MD	Arlington County, VA
Frederick County, MD	Gaithersburg, MD
Fairfax City, VA	Takoma Park, MD
Ocean City, MD	Fairfax County, VA

National Benchmarking

- Communities have been drawn from R. W. Beck's internal database





General Findings

The City of Rockville...

- Provides premium service
- Has rates that are among the highest
- Has higher absenteeism & injury rates than more automated systems
- Has good automation potential



General Findings—Fleet

- Solid waste vehicles are well maintained
- Maintenance and repair costs at low end of scale
- 15-year targeted useful life is problematic



Analysis of Alternatives

Scenario 1—Eliminate Backdoor Service

Scenario 2—2x/week Fully Automated Service

Scenario 3—1x/week Fully Automated Service


Scenario 4—1x/week Semi-automated Service



Scenario 1—Eliminate Backdoor Service

- Require curbside set-outs
- Except certified disabled residents
- Retain 2x/week frequency
- Retain all current service levels





Scenario 1 Results

- Establishes rate equality
- Eliminates 1 daily route
 - 1 rearload truck
 - 2 equipment operators
- \$120,000 annual direct cost savings
 - \$47,000 avoided injury costs
- Can be implemented immediately




Scenario 2—2x/week Fully Automated





Scenario 2—2x/week Fully Automated

- Requires curbside, cart-based set-outs
- Except certified disabled residents
- Retain 2x/week frequency
- Requires new fleet
- Requires standardized carts
- Increases the need for separate bulky item collection
- Facilitates increase in actual hours worked by collection crew
- Allows volume-based pricing



Scenario 2 Results


- Replaces 9 rearloaders with 9 automated trucks
- Requires distribution of 14,000 carts
- Adds one daily bulky item route
- Eliminates 7 equipment operator positions
- No direct cost savings
 - \$70,000 avoided injury costs
- Phased implementation





Scenario 3—1x/week Fully Automated

- Same as Scenario 2 except frequency is reduced from 2x to 1x per week
- Weekly frequency is most common for automated systems



Scenario 3 Results

- Replaces 9 rearloaders with 7 automated sideloaders
- Requires distribution of 14,000 carts
- Eliminates 9 equipment operator positions
- Adds one daily bulky item route
- \$210,000 annual direct cost savings
 - \$70,000 avoided injury costs
- Phased implementation





Scenario 4—1x/week Semi-automated




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Scenario 4—1x/week Semi-automated

- Requires curbside, cart-based set-outs
- Except certified disabled residents
- Reduces frequency to 1x/week
- Does NOT require new fleet
- Retrofitted tippers on existing fleet
- Requires standardized carts
- No separate bulky item collection
- Facilitates increase in actual hours worked by collection crew
- Allows volume-based pricing

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Scenario 4 Results

- Eliminates 3 daily routes
 - 3 active rearload trucks
 - 1 spare rearload truck
 - 6 equipment operators
- Requires distribution of 14,000 carts
- \$280,000 annual direct cost savings
 - \$70,000 avoided injury costs
- More rapid implementation



Cost Savings Summary

Scenario	Direct Cost Savings	Injury Cost Savings	Total Savings
Eliminate Backdoor	\$120,000	\$47,000	\$167,000
2x/week Fully Automated	\$3,000	\$79,000	\$82,000
1x/week Fully Automated	\$210,000	\$70,000	\$280,000
1x/week Semi-automated	\$280,000	\$70,000	\$350,000





Conclusions

- Doing nothing will...
 - Lead to rapidly increasing rates
 - Perpetuate an inequitable rate structure
- Multiple solutions exist
 - Industry trends support changes
 - Automation is operationally achievable



Consultant's Recommendation: 1x/week Semi-automated

Pros

- Equalizes services & rates
- Maximizes cost savings
- Retains current vehicle fleet
- Rapid implementation
- Improves aesthetics
- Positions City for full automation

Cons

- May be perceived as reduction in service
- Expect resistance to change





Requested Guidance

Options

- Status quo
- Retain backdoor and restructure rates
- Select from alternatives
- Evaluate more alternatives (2x/week semi-automated)
- Outreach to residents



Next Steps

- Validate course of action
 - Evaluate additional scenarios
 - Customer survey
- Develop implementation plan
 - Refine operational plan
 - Revise financial projections
 - Develop rate path





Questions

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